



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



KEITH CREAGH
DIRECTOR

June 1, 2016

VIA E-MAIL

Ms. JoLisa McDay
Acting Utilities Director
City of Flint
1101 South Saginaw St.
Flint, Michigan 48502

Dear Ms. McDay:

Subject: Approval of Temporary Sodium Hypochlorite and Sodium Hydroxide Feed Systems

This letter summarizes our June 1, 2016 meeting at the City of Flint (City) Water Treatment Plant (WTP) to discuss the design of temporary chemical feed systems for sodium hypochlorite and sodium hydroxide at Control Station No. 2 at the WTP. Additional staffs representing the City, Mr. Samir Matta and Mr. Warren Green from Lockwood, Andrews and Newnam, Inc. (LAN), and Mr. Bob London of the Department of Environmental Quality (DEQ) also participated in the meeting.

The purpose of the temporary systems is to provide short-term treatment until permanent systems can be installed. LAN provided dose calculations and proposed feed pump capacities for the following treatment objectives:

Sodium hypochlorite - Feed 0.3 to 1.0 milligrams per liter (mg/L) chlorine using 12% to 15% sodium hypochlorite and a treated water flow range of 10 to 18 million gallons per day (MGD).

Sodium hydroxide - Increase treated water pH by 0 to 0.7 units using 25% sodium hydroxide and a treated water flow rate of 10 to 18 MGD.

This office concurs with LAN's proposed chemical feed pump capacities and dose calculations for the above-stated treatment objectives. These objectives are in accordance with recommendations by the United States Environmental Protection Agency (EPA).

It is our understanding that final plans are being prepared by LAN for the temporary feed systems and will be submitted soon for permit issuance. In the interim, this approval letter will allow the City to order supplies and appurtenances for installing and operating the temporary feed systems. Mr. Jon Bloemker of this office has provided comments to you separately for consideration for the final plans.

Ms. JoLisa McDay
June 1, 2016
Page 2

Our May 27, 2016 letter to you expressed the urgency of installing the sodium hypochlorite feed system. With the warm weather approaching, it is imperative that the City's plans to install equipment to boost chlorine be expedited. We are pleased that the City is attempting to locate chemical feed equipment to begin feeding sodium hypochlorite as soon as practical while final plans for the temporary feed systems are being prepared. No further approval is required from the DEQ to begin adding the sodium hypochlorite in accordance with the feed rates and objectives stated above provided the sodium hypochlorite you feed conforms to ANSI/NSF Standard 60.

Please confirm receipt of this letter.

Thank you for the work the City is doing to improve water quality.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryce Feighner". The signature is fluid and cursive, written over a white background.

Bryce Feighner, P.E.
Special Advisor on Drinking Water
Department of Environmental Quality
Constitution Hall
525 W. Allegan St.
Lansing, Michigan 48909
517-652-1580

cc: The Honorable Karen Weaver, Mayor, City of Flint
Brigadier General Mike McDaniel (Ret.), City of Flint
Mr. Anthony Chubb, City of Flint
Mr. Keith Creagh, Director, DEQ
Mr. Jim Sygo, Chief Deputy Director, DEQ
Mr. George Krisztian, DEQ
Mr. Richard Benzie, DEQ
Mr. Jon Bloemker, DEQ
Mr. Bob London, DEQ